AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 10A-10C. This sheet, which includes Figs. 10A-10C, replaces the original sheet including Figs. 10A-10C. No new matter is introduced.

REMARKS/ARGUMENTS

Claim 1 and 12 are currently amended on this application.

Claims 3-6, 9-10 and 20-21 are canceled on this application.

Claims 22-25 are newly added on this application without entering new matter.

Drawings

According to the drawing requirement of figures 10A-10C in the office action mailed at September 04/2007, Applicant has made corresponding amendment shown in replacement sheet. It is believed that the amended figures 10A-10C are clear to understand the embodiment of the present invention.

Claim Rejection – 35 U.S.C 112

Claims 3, 4, 5, 6, 9, 10 and 21 are rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

In this response, Applicant cancels claims 3, 4, 5, 6, 9, 10 and 21 to overcome the rejection under 35 U.S.C 112.

Claim Rejection – 35 U.S.C 102

Claims 1, 6 and 11 are rejected under 35 U.S.C 102(b) as being anticipated by Endo et al. (US patent 4,652,928)

Applicant respectfully traverses the Examiner's rejection and requests reconsideration and allowance of claim 1 as being patentable over Endo et al.

Claim 1 recites:

Claim 1 (Currently Amended):

An apparatus for **down scaling a plurality of input frames** to output a plurality of output frames, comprising:

a selector for selecting a plurality of first sampling positions for a first input frame and a plurality of second sampling positions for a second input frame, wherein said first sampling positions and said second sampling positions are not substantially the same; and

a decision unit for outputting a first output frame through **regularly skipping at least one of pixels of said first input frame according to said first sampling positions** and outputting a second output frame through **regularly skipping at least one of pixels of said second input frame according to said second sampling positions.**

(Emphasis added)

With regards to claim 1 as a whole, applicant asserts that claim 1 is patentable over Endo et al. because Endo et al. at least fail to disclose the features of "down scaling a plurality of input frames", "regularly skipping at least one of pixels of said first input frame according to said first sampling positions" and "regularly skipping at least one of pixels of said second input frame according to said second sampling positions".

Please first refer to the column 4, line33- column 5, line 44 and Fig. 4A-Fig 4B of Endo et al., which introduces an embodiment to catch a frame with higher resolution

by an IT-CCD with a fixed and lower resolution. As shown in Fig 4B, the first frame period $t_{F1}$is composed of two fields, that is, A filed t_{a1} and B field t_{b1}; and second frame period t_{F2} is also composed of two fields, that is, A filed t_{a2} and B field t_{b2}, it is clearly know that Endo et al utilize the combination of two fields having different positions (1/2 Pitch difference) to get a frame with higher resolution, not to down scale a frame. Other embodiments disclosed in Endo et al also utilize the same skill to get a frame with higher resolution. After referring Endo et al, Applicant submits that the prior reference of Endo et al teach away from the present invention because of the invention of Endo et al. is always trying to get a frame with higher resolution by over sampling, either in first embodiment or in second embodiment, so that it is impossible for Endo et al to "down scale" a input frame. Furthermore, if it is impossible for Endo et al. to down scale the input frame, it is also impossible for Endo et al. to skip any pixel in the input frame.

Therefore, applicant respectfully requests reconsideration and allowance of the claim 1 as being patentable over Endo et al. with the fact that Endo et al. actually fail to disclose the features of "down scaling a plurality of input frames", "regularly skipping at least one of pixels of said first input frame according to said first sampling positions" and "regularly skipping at least one of pixels of said second input frame according to said second sampling positions" to process an image signal. Furthermore, applicant also considers that the content and scope of Endo et al. would not make the claimed invention obvious at the time because Endo et al. teach away from the present invention, which pursuing a more high resolution frame. Accordingly, other dependent claims incorporated to claim 1 should be allowable if finally claim 1 is found allowable.

Claims 12, 15, 20 and 21 are rejected under 35 U.S.C 102(b) as being anticipated by Blalock et al. (US patent 6,249,269 B1)

Applicant respectfully traverses the Examiner's rejection and requests reconsideration and allowance of claim 12 as being patentable over Blalock et al.

Claim 12 recites:

12. (Currently Amended) A method for **down scaling** an input image and outputting an output image, said input image comprising a plurality of image frames, each image frame comprising a plurality of pixels, said method comprising steps of:

selecting a plurality of first sampling positions for a first input frame and a plurality of second sampling positions for a second input frame, wherein said first sampling positions and said second sampling positions are not substantially the same; and

outputting a first output frame through regularly skipping at least one of pixels of said first input frame according to said first sampling positions and outputting a second output frame through regularly skipping at least one of pixels of said second input frame according to said second sampling positions.

With regards to claim 12 as a whole, applicant asserts that claim 12 is patentable over Blalock et al. because Blalock et al. at least fail to disclose the features of "down scaling input image", "selecting a plurality of first sampling positions for a first input frame and a plurality of second sampling positions for a second input frame, wherein said first sampling positions and said second sampling positions are not substantially the same".

Please refer to the column 12, line29- line 65 in conjunction with Fig. 4 of Blalock et al, which clearly introduces the operation of column selector 140. As the description in these two paragraphs, it can be known that the column selector 140 in turn output 1 state from the control line 139_1 to control line 139_4 to sampling circuit 132 according to the PIXEL clock so that the sampling circuit 132 can progressively

sample the Video signal Yc and output the sampled Video signal to pixel array 102. In other words, the column selector 140 disclosed in the Blalock et al. is used for selecting a column bus 131n to show the sampled pixel at pixel array 102. And it does not select the position or pixel in an input frame. On the other hand, the signals shown in Fig. 11 F and Fig. 11g disclosed in the Blalock et al. are referring to time period, not refer to sample position in one frame. The related description is shown in Column 27 line 18-line 26.

From the prior art reference of Blalock et al., it mainly shows how does an analog device drive pixel electrode; nowhere teach the function of down scaling an input frame and the step as the claimed invention. Therefore, Applicant asserts that claim 12 is patentable over Blalock et al. due to Blalock et al. fail to disclose the features of "down scaling a plurality of input frames", "selecting a plurality of first sampling positions for a first input frame and a plurality of second sampling positions for a second input frame, wherein said first sampling positions and said second sampling positions are not substantially the same" to process an image signal. Furthermore, applicant also considers that the content and scope of Blalock et al. would not make the claimed invention obvious at the time because the object and usage of Blalock et al. are such different from the claimed invention. Accordingly, other dependent claims incorporated to claim 12 should be allowable if finally claim 12 is found allowable.

Claims 1, 5, 8, 10 12-14, 17 and 19 are rejected under 35 U.S.C 102(e) as being anticipated by Deering et al. (US patent 6,417,861 B1)

Applicant respectfully traverses the Examiner's rejection and requests reconsideration and allowance of claim 1 and 12 as being patentable over Blalock et al.

With regards to claim 1 or claim 12 as a whole, applicant asserts that claim 1 and claim 12 are patentable over Deering et al. because Deering et al. at least fail to disclose the features of "down scaling a plurality of input frames", "regularly skipping at least one of pixels of said first input frame according to said first sampling positions" and "regularly skipping at least one of pixels of said second input frame according to said second sampling positions".

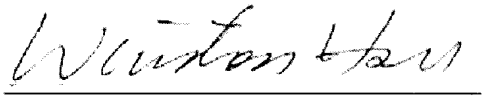
According to the disclosure of Deering et al., although it has mentioned that the graphics processor is operable to programmatically configure or vary the sample positions on a frame-by-frame basis or within a single frame; but nowhere disclose the features cited in the claimed invention, "**regularly skipping** at least one of pixels of said first input frame according to said first sampling positions", "**regularly skipping** at least one of pixels of said second input frame according to said second sampling positions" and "**wherein said first sampling positions and said second sampling positions are not substantially the same** ". Please refer to the Fig. 10 of the drawing, which is an embodiment of the present invention, and shows an original 6x6 input frames (Fig. 10 A) being scale down to 4x4 frames (Fig 10 B1 and Fig 10 B2). Refer to Fig 10 B1 frame, it is clearly shown that the pixels sampled from Fig 10A are regular, that is, skip one pixel every three pixels. The corresponding coordinates will be 0, 1, 3, and 4, wherein the pixels of coordinates 2, and 6 are skipped. Refer to Fig 10 B2 frame, it is also clearly shown that the pixels sampled from Fig 10A are regular, that is, skip one pixel every three pixels. The corresponding coordinates will be 0, 2, 3, and 5, wherein the pixels of coordinates 1, and 4 are skipped. By such skip method, the overall graphic information of the original image frame can be displayed as the one shown in FIG. 10C.

Therefore, Applicant believes that the Deering et al. would not anticipate the claimed invention and would not make the claimed invention obvious only by the disclosure of graphics processor is operable to programmatically configure or vary the sample positions on a frame-by-frame basis or within a single frame. Nowhere in the content of Deering et al disclose the feature of "**regularly skipping** at least one of pixels of said first input frame according to said first sampling positions", "**regularly skipping** at least one of pixels of said second input frame according to said second sampling positions" and "**wherein said first sampling positions and said second sampling positions are not substantially the same** ". Therefore, Applicant believes that those of pending claims are patentable over Deering et al.

Conclusions

From the foregoing response and amendment in claims, Applicant respectfully requests reconsideration and allowance of pending claims as being patentable over cited prior arts. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone conversation, or if the Examiner has any ideas or suggestions for further advancing the prosecution of this case.

Sincerely yours,



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